

ABSTRACT OF THE DISCLOSURE

2 A Time Ruler is used to periodically discover the Unit Interval (UI) for a data signal, which does
not change abruptly, but drifts with time and various parameters. The same Time Ruler can also be used
4 at other times to determine where in the Measured UI the data is being clocked (clock phase). Since the
present size of the UI is thus known through discovery, the clock signal can be adjustably delayed in
6 response to an error signal to keep its active edge in the middle of the measured UI. The delayed clock
signal can be produced from a clock delay line whose step size cooperates with the step size of the Time
8 Ruler, and that can insert and remove stages of clock delay as a function of the error signal. The error
signal is a shifted version of a collection of XOR's derived from latched clock phase information
10 produced by the Time Ruler. The amount and direction of the shifting is a function of the Measured UI.